

having the construction above will be described in detail referring to the accompanying drawings.

Figs. 2a and 2b are flowcharts showing the control process of a main server 10 shown in Fig. 1.

5 First, the control process of the main server 10 for receiving a P2P list in connection with the P2P list providing server 100, accessing the P2P Web, searching for the digital literary work shared through the P2P Web, and generating the file information to be shared on the P2P Web and the accessing
10 information of the P2P Web is described in detail.

When the supervisor activates the main server 10 by supplying power and executes a sharing search program for the main server, stored in the main server 10, the sharing search program is loaded to a main memory of the main server 10 and
15 executed by a processor therein.

The main server 10 displays a Web page for user interface of the sharing searching program on its display unit. The supervisor may input literary work information requiring the protection through the Web page for the user interface of the
20 sharing search program at step S10. As an example, the literary work information requiring the protection includes various kinds of the literary works such as a record or an image file, a writer and title of the literary work.

Further, when the supervisor assigns a digital file of a
25 corresponding literary work, which is stored in a

predetermined medium or network path and has an identifier, the assigned digital file is sent to a storage unit 12 by the main server 10 and stored in a corresponding area of the storage unit 12 at step S20.

- 5 The digital file having the identifier may include an advertising digital file, a digital file deteriorated in its quality and an encrypted digital file. Preferably, the advertising file, the deteriorated file and the encrypted file are pre-produced by a predetermined method(for example, by
- 10 manual task using an editing tool with a software format). The advertising digital file is the digital literary work for publicity, which is formally produced and distributed by a writer, a production and distribution company of a corresponding literary work, and a company for managing the
- 15 main server 10 and the sub-servers 20-1 through 20-n. Further, the advertising digital file is produced by extracting only some parts not the entire parts of an original literary work for the purpose of "Pre-View" or "Pre-Listening", or by deteriorating its value by, for example,
- 20 inserting an advertising paragraphs or an interview with the writer in the original literary work.

On the other hand, the digital file deteriorated in its quality is produced by significantly lowering the quality of the original literary work. For example, providing that the

25 deteriorated digital file is a music file or an image file,

the music file is produced by deteriorating or damaging a sound quality of a music file of the original record, and the digital image file is produced by deteriorating an image quality and sound quality of an original image file.

5 For example, a method of deteriorating or damaging the sound quality of the digital music file may include the functions of 1)inserting noise components such as a speech for publicity by a singer or performer in the music, 2)lowering a sampling rate of the digital music file to below that of an
10 original music(typically, digital file with MP3 format has a sampling rate of 44.1KHz) 3)distorting a waveform of the music file, and 4)converting a multi-channel sound of the music file to a single-channel sound.

Further, the encrypted music file is produced by
15 encrypting the original file using a well-known encryption algorithm. Here, it is possible to use any one of well-known symmetric key encryption algorithms and public key encryption algorithms as the encryption algorithm, however it is preferable to adopt the public key encryption algorithms,
20 considering a division of the keys.

Generally, the public key encryption algorithm so-called "asymmetric key encryption algorithm" is characterized in that it uses two different keys for encryption and decryption. One of the keys is a so-called private key and the other is a so-called public key. Typically, the public key is used in
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